

REMARKS

In view of the above amendments and the following remarks, reconsideration of the outstanding office action is respectfully requested.

Claims 1, 5, 8, 18, 19, 29, and 31 have been amended. Claims 1-32 remain pending. Paragraphs [0010], [0027], and [0029] of the specification have been amended to correct the spelling of the word “phthalic.” Paragraph [0014] of the specification has been amended in response to the pending new matter objection (as further described below). Paragraph [0030] of the specification has been amended in response to the pending informalities objection (as further described below). Applicants respectfully submit that no new matter has been added by these amendments.

The objection to the disclosure as containing informalities (at page 12, lines 7-18, of the specification) is respectfully traversed in view of the amendments to paragraph [0030]. In particular, as required by the Examiner, paragraph [0030] was amended to indicate that all six of the listed copolyester-polycarbonate resins are the common names for one particular polymer. Claims 8 and 29 have been amended to conform to the disclosure of amended paragraph [0030].

The objection to the July 18, 2003, amendment to paragraph [0014] (beginning at page 5, line 14, of the specification) under 35 U.S.C. § 132 for introducing new matter is respectfully traversed in view of the present amendments to paragraph [0014] and to claims 18 and 19.

In particular, paragraph [0014] has been amended to clarify that the “interfacial adhesive layer has an adhesive strength of between about 5.0 and about 30.0 g/cm, as measured using a reverse peel test as described in Example 5 of the present application” (emphasis added). Consistent with this amendment, claim 18 has been amended to clarify that the reverse peel test measures the adhesive strength of the “interfacial adhesive layer,” rather than the imaging member. Further, claim 18 has been amended to recite that the “reverse peel test measures the amount of force required to cause the interfacial adhesive layer to separate from the charge generating layer.” The amendments to claim 18 are supported by paragraph [0065] (particularly at page 25, lines 4-7).

Paragraph [0014] has also been amended to clarify that, in accordance with the original recitation of claim 19, the “imaging member has an adhesive strength of at least 100 g/cm, as measured using a 90-degree normal peel test as described in Example 5 of the present application” (emphasis added). Consistent with this amendment, claim 19 has been

amended to clarify that the 90-degree normal peel test measures the adhesive strength of the “imaging member.” Claim 19 has also been amended to recite that the “90-degree normal peel test measures the amount of force required to cause the charge transport layer to separate from the charge generating layer.” Support for the amendments to claim 19 can be found in paragraph [0066] (particularly at page 25, lines 19-20) of the specification.

The rejection of claims 18 and 19 under 35 U.S.C. § 112 (2nd para.) for indefiniteness is respectfully traversed in view of the amendments to claims 18 and 19. Support for the amendments to claims 18 and 19 are as already described above.

The rejection of claims 18 and 19 under 35 U.S.C. § 112 (1st para.) for lack of an adequate written description is respectfully traversed in view of the amendments to claims 18 and 19. Support for the amendments to claims 18 and 19 are as already described above.

The objection to claim 5 for containing informalities is respectfully traversed in view of the amendment to claim 5. In particular, claim 5 has been amended to correct the spelling of the word “phthalic.”

The rejection of claims 1-14, 16, 20-24, 31, and 32 under 35 U.S.C. § 103(a) for obviousness over U.S. Patent No. 5,686,215 to Bergfjord (“Bergfjord”) as combined with U.S. Patent No. 4,595,602 to Schank (“Schank”), American Chemical Society (ACS) Registry No. 71519-80-7 (“ACS Registry No. 71519-80-7”), and U.S. Patent No. 5,084,526 to Harris (“Harris”) is respectfully traversed in view of the amendments to claims 1 and 31 and the following remarks.

Bergfjord is cited as relating to an electrophotographic imaging member having a flexible titanium-coated polyester web that is coated with a charge blocking layer, an adhesive layer (containing a polyester resin and a polyarylate resin), and a charge imaging layer. The Examiner has acknowledged that the adhesive layer of Bergfjord is substantively distinct from the interfacial adhesive layer of the present invention. However, the Examiner has taken the view that Bergfjord discloses that its imaging member may further include an “overcoat layer” to improve resistance to abrasion.

Schank is cited as disclosing an overcoat layer for use in electrophotographic imaging members such as those described in Bergfjord. The Examiner further cites Schank as disclosing that a “primer layer” (including the poly(carbonate-co-ester) GE 3250 and a polymethylmethacrylate resin) may be applied to the imaging member to improve adhesion of the overcoat layer to the imaging member. The Examiner has taken the position that Schank’s primer layer is within the compositional and thickness limitations recited in various

claims of the present invention (e.g., claims 2-4, 7, 8, and 11-13). The overcoat layer is made of a cross-linked siloxanol-colloidal silica hybrid material. The primer layer is applied to the imaging member to improve adhesion of the overcoat layer to the imaging member.

ACS Registry No. 71519-80-7 is referenced in the pending office action as describing the copolyester-poycarbonate resin (commonly referred to as LEXAN® 3250 or GE 3250) used for the interfacial adhesive layer of the present invention.

Harris is cited as describing the structure of the LEXAN® 3250 (GE 3250) resin.

The Examiner has taken the position that it would have been obvious for one of ordinary skill in the art to coat the imaging member described in Bergfjord with a primer layer containing the poly(carbonate-co-ester) GE 3250 and the overcoat layer described in Schank. Claims 1 and 31 have been amended to recite that “the interfacial adhesive layer is disposed between the charge blocking layer and the charge imaging layer” of the imaging member of the present invention. Nowhere does Bergfjord or Schank teach or suggest the use of GE 3250 as an interfacial adhesive layer applied between the charge generating and charge blocking layers of the imaging member. Instead, Schank describes a process of applying the GE 3250 primer layer to the entire surface of an imaging member in order to enhance adhesion of the overcoat layer to the imaging member. Further, Schank does not teach the use of the GE 3250 primer layer as a substitute for the interfacial adhesive layer of Bergfjord. Thus, applicants respectfully submit that Bergfjord, as combined with Schank, ACS Registry No. 71519-80-7, and/or Harris, does not teach or suggest the imaging member of the present invention.

Accordingly, withdrawal of the record rejection of claims 1-14, 16, 20-24, 31, and 32 in view of Bergfjord as combined with Schank, ACS Registry No. 71519-80-7, and Harris is respectfully requested.

The rejection of claims 1-15, 17, 20-24, 31, and 32 are rejected under 35 U.S.C. § 103(a) for obviousness over U.S. Patent No. 5,418,100 to Yu (“Yu ‘100”) as combined with Schank, ACS Registry No. 71519-80-7, and Harris is respectfully traversed in view of the amendments to claims 1 and 31 and the following remarks.

Yu ‘100 is cited as teaching an electrophotographic imaging member containing a flexible titanium-coated polyester web that is coated with a charge blocking layer, an adhesive layer containing a cross-linked copolyester resin, and a charge imaging

layer. The Examiner has acknowledged that Yu '100 does not teach an imaging member having the interfacial adhesive layer of the present invention.

The Examiner has taken the position that it would have been obvious to one of ordinary skill in the art to coat the imaging member of Yu '100 with the GE 3250 primer layer and overcoat layer of Schank to yield the imaging member of the present invention. As discussed above, Schank is limited to teaching that an overcoat layer may be applied to the surface of an imaging member. The GE 3250 primer layer is used in Schank to adhere the overcoat layer to the surface of the imaging member. Nowhere does Schank teach or suggest the use of the GE 3250 primer layer as an interfacial adhesive layer. Yu '100 cannot overcome the deficiencies of Schank, because nowhere does Yu '100 teach or suggest using the GE 3250 primer layer of Schank as an interfacial adhesive layer in an imaging member. Further, nowhere does Yu '100, in combination with Schank, ACS Registry No. 71519-80-7, and/or Harris, teach or suggest an imaging member having an interfacial adhesive layer of the present invention disposed between the charge blocking layer and the charge imaging layer of the present invention.

Accordingly, in view of the present amendments to claims 1 and 31, withdrawal of the record rejection of claims 1-15, 17, 20-24, 31, and 32 in view of Yu '100 as combined with Schank, ACS Registry No. 71519-80-7, and Harris is respectfully requested.

The rejection of claims 1-10, 14, 17, 19-22, 31, and 32 under 35 U.S.C. § 103(a) for obviousness over Japanese Patent Publication No. 60-012552 ("Japanese Publication '552"), as combined with ACS Registry No. 71519-80-7, Harris, and U.S. Patent No. 5,660,961 to Yu ("Yu '961") is respectfully traversed in view of the amendments to claims 1 and 31 and the following remarks.

Japanese Publication '552 is cited as disclosing an imaging plate containing an electronically conductive aluminum plate and a charge imaging layer. The Examiner has acknowledged that Japanese Publication '552 does not disclose the use of a charge blocking layer.

Yu '961 is cited as describing a charge blocking layer that contains solid, finely divided light scattering inorganic particles. The adhesive layer may be deposited between the charge blocking and charge generating layers.

The Examiner has taken the position that it would have been obvious to one of ordinary skill in the art to incorporate the charge blocking layer of Yu '961 in the imaging plate of Japanese Publication '552 to arrive at the imaging member of the present invention.



However, in contrast to the teaching of Japanese Publication '552, the interfacial adhesive layer of the present invention is disposed between the charge blocking layer and the charge imaging layer. Although Yu '961 teaches depositing an adhesive layer between the charge blocking and charge generating layers, it does not teach or suggest the copolyester-polycarbonate interfacial adhesive layer of the present invention. Instead, Yu '961 teaches away from the present invention, in that it teaches using the inferior DUPONT® 49,000-type resin as the adhesive layer. Thus, in contrast to the present invention, nowhere does Japanese Publication '552, ACS Registry No. 71519-80-7, Harris, or Yu '961 teach or suggest the use of the GE 3250 resin as an interfacial adhesive layer between the charge blocking layer and charge imaging layer of an electrophotographic imaging member.

Accordingly, in view of the present amendments to claims 1 and 31, withdrawal of the record rejection of claims 1-10, 14, 17, 19-22, 31, and 32 in view of Japanese Publication '552, as combined with ACS Registry No. 71519-80-7, Harris, and Yu '961, is respectfully requested.

In view of all of the foregoing, applicants submit that this case is in condition for allowance and such allowance is earnestly solicited.

Respectfully submitted,

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